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Good supervision and PBL

Reflections and insights from Master students at the Faculty of Social Sciences at Aalborg University

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Good supervision and PBL

Reflections and insights from Master students at the
Faculty of Social Sciences at Aalborg University

19 September 2016

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Good supervision and PBL: Reflections and insights from Master students at the Faculty of
Social Sciences at Aalborg University

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Acronyms used

AAU	Aalborg University
PBL	Problem Based Learning
SAMF	Faculty of Social Sciences - Samfundsfag
SURE	Supervision Representations

1.1 Background

This field study was conducted at the SAMF faculty at AAU with the intention to investigate how students reflect on their experiences with supervision in a PBL environment. The overall aim of this study was to inform about the continued work in strengthening supervision at this faculty. This particular study invited Master level students to discuss:

- How a typical supervision process proceeds
- How they experienced and what they expected of PBL in the supervision process
- What makes a good supervision process

1.2 Methodology

This investigation involved collecting data through focus group interviews. The main reason for using a focus group approach was to gain insight into; students' attitudes, feelings, beliefs, experiences and reactions in a way in which would not be feasible using other methods. Their views may be partially independent of a group or its social setting however, are more likely to be revealed via the social gathering, and the interaction, which being in a focus group entails. Focus groups can be particularly useful when there are power differences between the participants and decision-makers or professionals, when the everyday use of language and culture of particular groups is of interest, and when one wants to explore the degree of consensus on a given topic (Morgan & Kreuger, 1993).

Ethical considerations for focus groups are the same as for most other methods of social research (Homan, 1991). Participants received full information about the purpose and uses of participants' contributions. Emphasis was placed on being honest and keeping participants informed about the expectations of the group and topic, and individuals were not pressured to speak. A particular ethical issue to consider was the handling of sensitive details which meant we assured individuals full confidentiality but we also reminded participants to keep confidential what they hear during the meeting. All participants gave their signed informed consent while we made sure that all data was anonymised.

In preparation for the interviews, a literature review was produced to identify what has been identified as good supervisory qualities and supervision experiences. Search for literature involved search ERIC – using keywords: Supervision, supervisor, university, PBL. A search was also undertaken using Google Scholar. Following the literature review key themes were grouped and were used to produce what was called the *SUpervision REpresentation Grid* [SURE Grid]. This grid was used for preparation of the focus group interviews, meaning student received the grid in advance so they could think about the statements and knew what would be discussed during the interviews.

After the interviews were finished the discussions were fully transcribed and processed in Nvivo by reading through and selecting relevant statements and themes that thematically matched different topics in the SURE Grid. This was done individually by the researchers and then the two analyses were compared and matched. The resulting grid was sent to the students to read and approve the content or add additional comments, if deemed necessary.

1.3 Key Findings

17 master students representing three different educational programmes from IT-management (Danish: IT-ledelse), Politics and Administration (Danish: Politik og Administration) and Social Science (Danish: Samfundsfag) were contacted by e-mail with an invitation and introduction to the focus group interview. 6 students responded and were able to attend the interview. This resulted in 3 focus group interviews with 2 students attending each interview.

1.3.1 Results – the SURE Grid

The data processing utilized the SURE Grid to represent the participants' views on the experiences as students and with supervisors working on projects set in the PBL environment. None of the interviewed students worked individually on projects during their studies, so their consideration on the student's role is both a reflection on their own performance, as well as that of their peers.

The SURE Grid (Table 1) provides an overview of the students' reflections on different dimensions relating to the supervision process and experience in the PBL environment.

The Grid is expanded in the following section with more detailed elaborations.

SURE Grid	What students say about the supervision process	
What the literature suggests:	Student role	Supervisor's role
The liberal/humanist view: Supervision should be a rational and transparent engagement between autonomous individuals. (Grant, 1999, 2005)	<p><i>Students operate both as individuals and as a group.</i></p> <p><i>They tend to act on behalf of the group instead of on behalf of the individual.</i></p> <p><i>Groups are chosen based on group members rather than project theme.</i></p> <p><i>Students should be prepared to negotiate and compromise.</i></p> <p><i>In the group setting more individuals can ask critical questions while the individual may miss details.</i></p>	<p><i>Supervisors should be transparent and clear in their instructions and feedback.</i></p> <p><i>Supervisors should display an interest in their students' work.</i></p> <p><i>Supervisor should share what they are working on.</i></p> <p><i>Supervision starts with a focus on structure - later need for transparency on how to apply concepts.</i></p> <p><i>Supervisors should also be experts in the content of the topic that is being covered.</i></p> <p><i>Supervisors are shaped and limited by the institutional frameworks.</i></p>

Supervision as “critical conversations” and “receiving mentorship (more than) instruction”: (Bates et al. 2009; Knowles 1999, Taylor 1995)	<p><i>Students need to learn having critical conversations and understand the difference between mentorship and instructions.</i></p> <p><i>Different approaches are introduced for different needs.</i></p> <p><i>There are times where instructions are needed and times for critical conversations and mentorship.</i></p> <p><i>Students need critical competencies on the higher semesters - instructional guidance is required in the first years.</i></p>	<p><i>The supervisor provides the starting points for critical thinking.</i></p> <p><i>Too harsh critique can result in students experiencing loss of control and discouragement.</i></p> <p><i>Instructions can be difficult; they can be subjective and differ from one supervisor to the next.</i></p> <p><i>Supervisors should provide instructions in a positive not negative manner.</i></p>
Qualities of a good supervisor: approachable and friendly; supportive, positive attitude; open minded, prepared to acknowledge error; organized and thorough; stimulating and conveys enthusiasm for research. (Cullen et al. 1994; Tahir et al. 2012)	<p><i>Students are aware that supervisors are busy.</i></p> <p><i>Students feel responsible for setting a positive atmosphere.</i></p> <p><i>They also have a responsibility to familiarize themselves with the learning outcomes.</i></p> <p><i>Students discuss supervisor qualities amongst each other.</i></p>	<p><i>Practices differ.</i></p> <p><i>Approachability means also to admit mistakes.</i></p> <p><i>Enthusiasm is important to support motivation.</i></p> <p><i>The supervisor must also know the field of study.</i></p> <p><i>Good supervisors use the ‘studieordning (study regulations)’ not only during the exam.</i></p> <p><i>Good supervisors make appointments and have a good working structure.</i></p> <p><i>Supervisors must read submitted material.</i></p>
The contradictory supervisor: delivery versus care (Grant, 2003, 2005; Deuchar, 2008)	<p><i>It is up to the students to involve the supervisor if problems occur.</i></p> <p><i>Students tend to solve individual issues themselves unless the quality of the work/report may be compromised.</i></p>	<p><i>Supervisors need the social competencies to sense how the group dynamics work.</i></p> <p><i>It is difficult for the supervisor to gain insights.</i></p> <p><i>Students appreciate when supervisor take a personal interest.</i></p>
Classification of four preferred supervisor styles: contractual (high support, high structure), directorial (low support, high structure), laissez-faire (low support, low structure), and pastoral (high support, low structure). (Gatfield 2005; Goodman-Delahunty et al., 2010).		<p><i>Preference for the contractual supervisor</i></p> <p><i>Contractual supervisors in early years.</i></p> <p><i>Directorial supervisors are needed in the senior years.</i></p>

The problem and project based teaching and learning approach at AAU:	<p><i>Students code and analyze group dynamics.</i></p> <p><i>They learn to operate different roles</i></p> <p><i>Cooperation with stakeholders.</i></p> <p><i>The PBL model has a supportive function.</i></p> <p><i>It improves overall competencies; older students act as “mentors” for younger students.</i></p>	<p><i>Some supervisors are more familiar with the PBL model than others.</i></p>
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Table 1: SURE Grid: responses by SAMF Master level students

1.4 Findings expanded

The following section expands on the SURE Grid to elaborate on the literature findings to compare it with the student responses. The section is organised by the 6 categories that were identified.

1.4.1 *The liberal/humanist view: Supervision should be a rational and transparent engagement between autonomous individuals.*

In an elaboration on how students can improve their own process of supervision, Grant and Graham (1999) identify that “the supervision relationship is between two parties who, while clearly of unequal status and power are both capable of action in the Foucauldian sense” (p. 77). By this they mean that the power relation between student and supervisor goes beyond a domination (the supervisor) – submission (the student) relationship and instead can operate a relationship with an “expectation of independence and autonomy” (ibid, p. 77). People who are involved in these kinds of relationships are able to interact without overpowering each other.

What distinguishes supervision from the usual teaching practices is the need for pedagogical and personal relationship skills so that supervision, not only deals with writing a good thesis, but also deals with the “transformation of the student into an independent researcher” (Grant, 2003, p. 175).

Students in our interviews reflected on the term transparency from the student’s perspective felt that students operate both as individuals and as a group. They felt responsible for their own learning but also, for the progress of the group. Well-functioning groups are characterized by being transparent and trusting each other. This ensures the success of the individual and the group. Over time the group becomes an ‘individual’ in the sense that each student acts on behalf of the group instead of on behalf of the individual. Individual students will stay with the group members that they have had good experiences with in previous semesters, rather than choosing a group based on the topic of the assignment.

Transparency within a functioning group requires being able to negotiate and compromise. The advantage of working in the group is that there are more individuals who can ask critical questions that the individual may miss.

The students felt that good supervisors are usually those who are the most transparent and clear in their instructions and feedback. This also includes professional information and feedback, up to, and after the exams.

Transparency can also mean that supervisors show an interest in their student's work, but this may also mean that they show their disappointment when they are not interested or disagree with suggestions made by students.

Transparency may also mean that the supervisor shares what they are working on and where their own research lies. However transparency needs, in respect to learning, outcomes that change from the bachelor years, to the master; the early years are characterised by a need for structure and big ideas while later, there is a need for transparency on how to apply concepts.

Transparency may also reflect subject knowledge: Supervisors should not only be knowledgeable of the general approaches to conducting problem based research but should also be experts in the content in question.

The students commented that autonomy and freedom of the supervisor, as well that of the students, is shaped and perhaps limited by the institutional frameworks study guidelines.

1.4.2 Supervision as "critical conversations" and "receiving mentorship (more than) instruction"

Giving and receiving supervision can have advantages for both partners in the supervision "relationship". As Grant and Graham state, supervisors experience pleasure and satisfaction when being presented with new approaches within their professional field, while students appreciate the "value in receiving both challenge and affirmation of their work, and in relating more collegially with academics" (1999, p. 79).

The notion of being a reflective practitioner, and how to nurture students to adopt such practices for themselves, has been reported for example in architectural studies (Schon's 1987) and in courses on research and writing (McMichael & McKee, 2008); to analyse the student-supervisor (also referred to as coach) interaction. It is argued that students need to develop competencies to reflect on their own practices and to achieve this they need to be coached (McMichael & McKee, 2008). Such approaches take the supervisory dialogue to another level, where conversations become 'critical' and supervisors are not instructors, but mentors.

In the conversations with the students they reflected that they experienced their supervision in the various projects as both having both; critical conversations/mentorships and instructional conversations. They felt that good supervision consists of critical conversations or

mentorships where the students are introduced to different approaches or suggestions are made that help them reflect on their arguments and conclusions.

The students also felt that there are areas where instructions are needed, and other times where the dialogue needs to be more of a critical conversation and mentorship. Instructions they felt; were helpful when dealing with specific questions. However, the students reflected also that they see themselves being responsible for communicating to the supervisor what kind of feedback they need.

As a general trend they said were critical conversations in the higher semesters, while guidance and instruction is needed in the first years to 'learn how to learn'. Their suggestion to supervisors was that they should provide starting points for critical thinking so that students could take those further.

The students thought also that too critical feedback from supervisors can result in feelings of loss of control and discouragement. Providing instructional feedback was also experienced as subjective and of variable quality with each supervisor. Supervisors should provide instructions in a positive not negative manner.

1.4.3 Qualities of a good supervisor

Factors as diverse as language, work style and personality can impact on how students experience supervision. Issues like ignorance, misinformation or the mismatch of a supervisor's research area and related content knowledge can influence the quality of the supervision. Organizational factors include the amount of students who need to be supervised as well as the supervisors competing responsibilities (Grant & Graham, 1999), which can be a time consumer.

Good supervisors should be approachable, friendly and supportive, meanwhile have a positive attitude and an open mind. Besides the quality of acknowledging errors, being organized and thorough and meanwhile stimulate and convey enthusiasm for research is very much appreciated. Tahir et al. (2012) find in their study on effective supervision that the three most important attributes supervisors should have are to be "friendly, approachable and flexible; knowledgeable and resourceful; and encourage students to work and plan independently" (p.221).

Interestingly, when asked in the interview about the good supervisor quality; our participants shifted the focus back on the responsibilities they feel they have for making good supervision possible. They stated that they are aware that supervisors are busy and that they are given only a specific amount of time for the supervision. They said they feel responsible for setting a positive atmosphere during a supervision meeting and to creating a good environment for the supervisor. Students expressed that it is their responsibility to take care of familiarizing themselves with the learning outcomes in the 'studieordning', especially in the more senior years.

They agreed that supervisors need to be approachable, but found that practices differ from those supervisors who set exact times and numbers of meetings to supervisors who have an

open door policy – in both cases the practices still imply approachability. Approachability was also interpreted as the quality to admit mistakes.

Supervisor enthusiasm was identified as an important factor to support motivation and may for example include that students can borrow books from supervisors. Enthusiasm for students' work was important for the students to experience from their supervisors but not only after the exams. Approachability was identified, not counting for everything; students want to work with supervisors who know the field of study. It was also their experience that younger supervisors/PhD students showed often greater enthusiasm for students' project work compared to the more experienced supervisors.

Students reflected that supervisors don't seem to use or refer back to the 'studieordning' (study plan) during their supervision but only during the exam.

Being organized, meant to our participants; making appointments and having a good working structure. To the students this includes also that supervisors have actually read the material that students have sent before a meeting. Some supervisors the students had, behaved like 'helicopter' supervisors, correcting each and every comma, while they felt they needed to learn to think and work independently. While students met with their supervisors in their respective offices, or sometimes in group rooms, they also had no problem conducting meeting via Skype.

Supervisor qualities were a subject that students discuss and share amongst each other, and if the students have a choice then they opt for supervisors with a good reputation.

1.4.4 The contradictory supervisor: delivery versus care

Supervisors are reported to be acting, at times, in contradictory ways. They provide structure and remind students of their duties but they also have pastoral duties, taking care of students who may experience problems or challenges during the supervision period. This may give the appearance of contradictory supervision styles when, for example; supervisors demand that students are productive, while also giving students support to deal with life challenges they experience. This dichotomy may be due in parts to increased pressures on supervisors to make sure that their students finish on time (Deuchar, 2008). Since most of the relevant literature refers to PhD supervision it is further highlighted that supervision is also about being caring and helping the student to transform into an independent researcher (Grant, 2003, 2005). And while this may not be the case for a student receiving supervision as a bachelor or master level student this can be re-interpreted to becoming an independent professional (2005, p.340).

In our interviews students explained to us that they felt; involving the supervisor in the group process, or when things don't go well, was up to the students themselves. The supervisor's responsibility of caring for students and dealing with their personal issues was in their opinion controlled by the students and their need to involve the supervisor.

The reasons for involving the supervisor into social or private issues was mostly described as those instances that affect the group, and when that was the case it was important to inform

the supervisor that the quality of the work/report may be compromised due to a student's personal situation.

The students mentioned also they thought it was important that supervisors had the necessary social competencies it takes to sense how the group dynamics work – both during the process and the exam.

Students also thought, that due to spending only relatively short time with the students, it may be difficult for the supervisor to gain insights into the group dynamic. However, they commented that it was appreciated when a supervisor asked personal questions during the supervision meetings as it indicates an interest in the student as a person.

1.4.5 Classification of four supervisory types

Based on literature examining supervision styles, supervision management and supervision quality, four paradigms of supervision styles have been identified (Taylor & Beasley, 2005). Firstly; the 'contractual' supervisor style where supervisors and students negotiate the extent of the support in both project and personal terms. Secondly; is the 'directorial' supervisory style, which assumes that students need support in managing the project but not themselves. Thirdly; the 'laissez-faire' supervisory style, that assumes that students are able to manage their research project and themselves. Fourthly; the 'pastoral' supervisory style, where students are assumed to be capable of managing the project but require personal support.

These categories were explained to the students and distinguished in brief as:

- A. Contractual - high support and high structure
- B. Directorial - low support and high structure
- C. Laissez-faire - low support and low structure
- D. Pastoral - high support and low structure

Our participants were asked to reflect upon their *preferred* supervisor and to classify the supervisors' performance based on these classifications.

There was an overall preference for the 'contractual' supervisor while experiences had been varied ranging from supervisors who acted directorial to laissez faire.

The participants thought that contractual supervisory styles are mostly needed in the early bachelor years, while directorial supervisors are needed in the more senior years, where students have acquired basic skills and knowledge but still wanted the supervisor to stay close to the students' work. At more senior levels students felt, they knew better how to handle the group dynamics on their own. In their feedback the classification of high structure could be further differentiated between providing basic structure and key components to the beginning student, and providing structure for critical analysis which was what was needed at more senior levels.

1.4.6 The problem and project based teaching and learning approach at AAU

The PBL model at Aalborg University is an acknowledged model, based on the synergy of three pedagogical elements – cognitive learning through experience, student centred learning through collaboration and interdisciplinary learning through selection of methods and theories that address real-world problems (Dahl 2016; Kolmos, Krogh & Fink, 2004). However, there is a notable gap in the literature concerning the specifics pertaining to supervision in the PBL environment. While Dahl (2016) reports about the alignment between course work, supervision and exams and how students experience this, the article does not go into any specifics of the nature of supervision in the PBL setting. Notable is that in the AAU PBL model students start from the first semester with supervised project work contrast to many other University students who do this much later. The literature on supervision reflects mostly on from PhD supervision or Master thesis supervision (see for example Kamler & Thompson 2006).

In the focus group interviews, the students explained that the experience with the PBL model teaches students; how to code and analyse group dynamics, how to operate in different roles within a group and how to cooperate and how to adapt to stakeholders (supervisors/external partners/ group members) expectations. They explained that the PBL model has a supportive function, only as long as everybody contributed with what was expected from them. The students explained that in order to improve their PBL competencies earlier in their education, older students could act as “mentors” helping them to understand the concepts of problem and project based approaches on AAU since they were at an intermediate level and could easier relate to the junior level students. Students commented that some supervisors were more familiar with the PBL model than others. They suggested that since this is experienced as unsettling for the students it might be useful to develop ‘a frequently ask question list’ for inexperienced supervisors in PBL.

1.5 Conclusion

Hasrati (2005) explains that supervisors are models who make their tacit expertise explicit to their students. They also coach, meaning they help students to accomplish specific tasks and that they fade this support, when they have imparted the earlier two competencies to their students. It seems that this description is viewed by the students somewhat spread from the start of their study until the end. In the AAU PBL model however, it means that this process is a step by step process that would require that supervisors in a given program communicate between each other to share information on what kind of support was needed so that the scaffolding students receive progresses from the initial stages of their research to more independent research later on.

There is no doubt that supervision is a complex undertaking and requires particular skills and expertise. The students in our investigation clearly reflected on their supervision experiences from the perspective of being a member of a project group. Thus the background to their reflections was set in the AAU PBL context. Since they had experienced supervision always as a group member they regarded that they had a number of responsibilities that determined the success of the supervisory process, ranging from identifying how groups operate, and which group to join, to managing complex issues first by themselves before involving their supervisor. In contrast to what the literature reports it seems that the group functions in the supervisory process as a way to carry much of the support students need when they work on research projects. Therefore, they appear to have high expectations as to the academic guidance they ought to receive. The students in this investigation reported having had varying experiences but they attributed the success, or failure to the partnership between students and supervisor.

1.6 Limitations

This report's limitation stems from the study design conducting focus group interviews with a small number of self-selected students. The students we talked to were all in their final semester and regarded themselves as successful students. Thus they represent particular types of student who learned to successfully operate in a specific educational system. This means that the findings in this report will not be necessarily representative for students outside the AAU PBL environment. We did not talk to students who failed the system and their responses may have been quite different. However, none of the students we interviewed had worked together; they represented different study programmes and shared a variety of stories having experienced supervisors at every semester. While those stories represent the subjective reflections of individuals it is those ideas that shape how the supervisory process is perceived and experienced.

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